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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,822	12/07/2001	Tokuro Ozawa	111033	7718
25944	7590	02/11/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			DINH, DUC Q	
			ART UNIT	PAPER NUMBER
			2674	

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,822

Applicant(s)

OZAWA, TOKURO

Examiner

DUC Q DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-11 is/are rejected.
- 7) ☐ Claim(s) 5-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

Page 9, line 15, "counter electrode 118" should read "counter electrode 108"

Line 17, "crystal 150" should read "crystal 105".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagata et al. (U. S. Patent No. 5,706,023), hereinafter Nagata.

In reference to claims 1 and 9-11, Nagata disclose in Fig. 1 shows an electric equivalent circuit of a display element of the TFT (Thin Film Transistor) active matrix for driving the LCD. Each display element possesses a TFT 3 at the intersection of a scanning signal wire 1 and a picture signal wire 2. The TFT includes, as parasitic capacitances, gate-drain capacitance Cgd 4, source-drain capacitance Csd 5, and gate-source capacitance Cgs 6. Furthermore, as intentionally formed capacitances, there are the liquid crystal capacitance Clc\* 7 and the storage capacitance Cs 8. Drive voltages are applied from external sources to the display element. Specifically, a scanning signal Vg is applied to the scanning signal wire 1, a picture signal voltage Vsig is applied to the picture signal wire 2, a second modulation signal Vt is applied to

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the counter electrode of the liquid crystal capacitance  $C_{lc}^*$ , and a first modulation signal  $V_e$  is applied to one of the electrodes of the storage capacitance  $C_s$ . Through these parasitic and intentionally formed capacitances, the effects of the drive voltages appear on the picture element electrode A. Storage capacitor  $C_s$  8 having one terminal connected to the pixel electrode

As shown in Fig. 2, when a voltage of the data line during the writing period the voltage of the other of the terminal (Fig. 2e) is shifted to high after the scanning signal turns off (Fig. 2a) and the other writing period when the other terminal is the on-voltage, the voltage of the other terminal is shifted to low (Fig. 2e) after said scanning signal is turn off (Fig. 2a).

In reference to claim 2, Nagata discloses that approximate capacitance values used in the devices  $C_s=0.68$  pF,  $C_{lc}(1)=0.130$  pF.

In reference to claims 3-4, refer to the rejection of claim 1. In addition, Fig. 6-7 of Nagata shown that other terminal of the storage capacitor is connected to each row in common via a capacitor lines and being divided as line 17a, 17b and 17z as claimed.

***Allowable Subject Matter***

4. Claims 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: none of the cited prior arts teaches or suggests: a low-level capacitor line which is maintained at a predetermined first voltage; a high-level capacitor line which is maintained at a second voltage that is higher than said first voltage; and a selector which selects either one of said low-level

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capacitor line and said high-level capacitor line depending on the voltage of a selection signal line, and applies the voltage to the other terminal of said storage capacitor.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See Form PTO 892.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q DINH** whose telephone number is **(703) 306-5412**. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,  
Arlington, Va Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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DUC Q DINH

Examiner

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DQD

February 6, 2004

  
REGINA LIANG  
PRIMARY EXAMINER